



UNITED STATES PATENT AND TRADEMARK OFFICE

Eel

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,477	10/23/2001	Antti O. Kangas	872.0035.U1(US)	7456
29683	7590	12/13/2005	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			MERED, HABTE	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/004,477	Applicant(s) KANGAS, ANTTI O.	
	Examiner Habte Mered	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/12/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 30 September 2005 has been entered and fully considered. Claims 1, 3-7, 9-26 remain pending and claims 2 and 8 are cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-7, and 9-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP TS 04.60 (ETSI, "Digital Cellular Telecommunications System (Phase2+); General Packet Radio Service (GPRS); Mobile Station (MS) – Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) Protocol", October 2000, pp 1-221) in view of Bridges et al (US Pub. No. 2003/0054809), hereinafter referred to as Bridges.

3GPP TS 04.60 discloses the procedures for RLC/MAC functions of the GPRS radio interface (Um) when operating on a Packet Data Channel (PDCH).

4. Regarding **claims 1, 7, 13 and 20**, 3GPP TS 04.60 teaches a method for operating a wireless communication system having packet data capabilities, comprising: sending a message from a mobile station to a network on a same physical channel that is used to transmit packet data (**3GPP TS 04.60 teaches on Section 11.2.16 and 11.2.17 show Packet Resource request and Packet PSI messages being sent on**

PACCH. The PACCH is on the same physical channel as PDTCH which is the one used to transmit packet data as indicated in Figure 1. PDTCH and PACCH are two different logical channels on the same physical channel as further illustrated in section 7.1.2.2.1 on Line 3.) the message specifying individual ones of packet system information (PSI) messages that are required for reception by the mobile station; and in response to receiving the message (The message being Packet PSI Status message, 3GPP TS 04.60 teaches on Page 25 in Section 5.5.2.1.3 in the last paragraph that upon receiving such a message the network will send missing PSI messages for that particular mobile station on PACCH) , sending PSI messages from the network to the mobile station over the same physical channel used to transmit the packet data, wherein the message is a PACKET PSI STATUS message. (See Section 5.5.1.4, Page 21, Lines 16-20; Section 5.5.2.1.3, Page 25, last paragraph; 3GPP TS 04.60 discloses that packet system information message is sent by the network on PACCH. As shown in Figure 1 on Page 14, PACCH and PDTCH are two different logical channels on the same physical channel and are further illustrated on Page 32, in Section 7.1.2.2.1, Line 3. 3GPP TS 04.60 further discloses that the mobile station to indicate to the network what packet system information messages it has received uses the Packet PSI Status message. See Page 123. As indicated in the last paragraph of Section 5.5.1.4.3 the Packet PSI Status message is sent until all necessary packet system information messages are sent by the network and acknowledged by the mobile station. See Page 25 Last Paragraph.)

3GPP TS 04.60 readily teaches the ability of a mobile to send a specific message to the network on the same physical channel that is used to transmit packet data. 3GPP TS 04.60, however, fails to disclose that the mobile station can specify individual system information messages, it desires, to the network and that the network complies with the request.

Bridges discloses an intelligent roaming system with over the air programming.

Bridges teaches that a mobile station can request specific system information messages from the network and the network will only send the requested system information messages. **(Bridges discloses in Figure 5 how a mobile is programmed using over the air programming technique by the Base Station (BMT). In Figure 5 the mobile sends a Configuration Data Response (CDR) Message that has specific system information messages as information elements of the CDR as shown in Table 7A. These information elements are included based on the desire of the mobile and are all optional. These information elements are system information that is required by the mobile strictly for reception purposes. See Paragraphs 91-93. The Base Station responds with a Download Request Message (DRM) downloading the specific requested system information elements by the mobile. See Paragraph 94 and Tables 8A, 8B, and 9. Further Bridges shows that this system information is transmitted in the same physical channel as the DTC (Data Traffic Channel) where normal data traffic is transmitted. See paragraphs 88 and 128. It is obvious to one ordinarily skilled in the art the various requested**

system information elements can be sent back to the mobile in one message or several messages and can easily be viewed as system information messages.)

It would have been obvious to one having ordinary skill in the art at the invention was made to modify 3GPP TS 04.60's method by incorporating Bridges' procedure over the air programming of a mobile, the motivation being as stated by Bridges in paragraph 21 is to permit re-programming of a mobile with new intelligent roaming information as it becomes available. Additional motivation is that the mobile station can save radio resources and reduce battery consumption by not requesting unnecessary system information such as the one already stored in the system each time it changes cells or while moving in the same cell.

5. Regarding **claims 3 and 9**, 3GPP TS 04.60 discloses a method wherein the physical channel conveys a Packet Associated Control Channel (PACCH). **(See Page 21, Lines 16-20)**

7. Regarding **claims 4 and 10**, 3GPP TS 04.60 discloses a method including, wherein the operations of sending the message and transmitting the PSI messages occur during a packet data transfer mode without suspending an established Temporary Block Flow (TBF). **(See Section 5.5.1.2.1 1st Paragraph and Section 5.5.1.4, Page 21, Line 19; Note that the TBF as specified in the specification on Page 2 line 12 is simply packet data flow in both directions. 3GPP TS 04.60 clearly shows in packet transfer mode PSI are sent via the control channel (PACCH) without suspending packet data transmission (i.e. TBF) on PBCCH)**

8. Regarding **claims 5, 11, 14 and 21**, 3GPP TS 04.60 discloses a method, wherein the mobile station fills the Packet PSI Status message by including fields **PSIx_COUNT** and **Instance_Bitmap**, and by setting their respective fields to zero for the particular PSI message type in the **PACKET PSI STATUS** message. **(See Page 123 for the description and use of the different fields of the Packet PSI STATUS message. To implement Bridges' over the air programming of mobiles procedure while keeping the existing RLC/MAC protocol of 3GPP TS 04.60, the ideal existing message to modify for requesting system information message from the network will be Packet PSI STATUS message. However, a new message can easily be added in the protocol.)**

9. Regarding **claims 6, 12, 15 and 22**, 3GPP TS 04.60 discloses a method, wherein, in response, the network determines that the mobile station has not received the particular PSI message type, and disregards an indicated **PSI_CHANGE_MARK** in the **PACKET PSI STATUS** message. **(See Page 123 for the description and use of the different fields of the Packet PSI STATUS message. To implement Bridges' over the air programming of mobiles procedure while keeping the existing RLC/MAC protocol of 3GPP TS 04.60, the ideal existing message to modify for requesting system information message from the network will be Packet PSI STATUS message. However, a new message can easily be added in the protocol.)**

10. Regarding **claims 16 and 23**, 3GPP TS 04.60 discloses a method, wherein sending the **PACKET PSI STATUS** message comprises indicating mobile station-supported PSI message types in a **Received PSI Message List** in the **PACKET PSI**

STATUS message. (See Page 123 for the description and use of the different fields of the Packet PSI STATUS message. 3GPP TS 04.60 discloses that the PSI Message List in the PACKET PSI STATUS message indicates the system information messages already received by the mobile and has to be supported by the mobile. To implement Bridges' over the air programming of mobiles procedure of course either the Packet PSI Status message has to be modified by adding new fields or one needs to modify the use of current fields in the message to accommodate the new functionality taught by Bridges.)

11. Regarding claims 17 and 24, 3GPP TS 04.60 discloses a method, wherein the mobile station indicates in the PACKET PSI STATUS message, for each PSI message type for which the mobile station desires a PSI CHANGE MARK value, the present status of the PSI message type and that the PSI message type has not been received. (See Page 123 for the description and use of the different fields of the Packet PSI STATUS message. See also Page 26, Table 1; 3GPP TS 04.60 discloses the use of PSIX_CHANGE_MARK message in relation to the system information messages received by the mobile. To implement Bridges' over the air programming of mobiles procedure of course either the Packet PSI Status message has to be modified by adding new fields or one needs to modify the use of current fields in the message to accommodate the new functionality taught by Bridges.)

12. Regarding claims 18 and 25, 3GPP TS 04.60 discloses a method wherein the mobile station desires the PSI CHANGE MARK value at least during a partial acquisition of PSI messages. (See Page 19, Lines 7-8, Page 26, Table 1)

Art Unit: 2662

13. Regarding **claims 19 and 26**, 3GPP TS 04.60 discloses that for the PSI messages that are required for reception by the mobile station, the PSI message type can be indicated to be present on a Packet Broadcast Control Channel by the network. **(See Section 5.5.2.1.2 1st Paragraph.)**

3GPP TS 04.60 however fails to disclose that the PSI message types that are desired for reception by the mobile station are selected based on the features the mobile supports.

Bridges discloses that the PSI message types that are required for reception by the mobile station are those that the mobile station considers relevant based on the features that the mobile station supports. **(See Table 7a, 7b and Paragraphs 90 and 93)**

It would have been obvious to one having ordinary skill in the art at the invention was made to modify 3GPP TS 04.60's method by incorporating Bridges' procedure over the air programming of a mobile, the motivation being as stated by Bridges in paragraph 21 is to permit re-programming of a mobile with new intelligent roaming information as it becomes available. Additional motivation is that the mobile station can save radio resources and reduce battery consumption by not requesting unnecessary system information such as the one already stored in the system each time it changes cells or while moving in the same cell.

Response to Arguments

14. Applicant's arguments, with respect to claims 1, 3-7, 9-26, have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2662

15. In light of Applicant's amendment, the objection raised by the Examiner regarding the abstract exceeding 150 words has been withdrawn.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to show the state of the art with respect to broadcasting system information in a cellular communication network:

US Patent (6, 628, 946) to Wiberg et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046.

The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/004,477

Page 10

Art Unit: 2662

HM

12-10-2005



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000